

Serial No.: 10/660,471

Confirmation No.: 4947

Applicant: PALMBERG *et al.*

Atty. Ref.: 06730.0056.NPUS00

IN THE CLAIMS:

1-34. (Cancelled)

35. (New) A hydraulic power assisting steering apparatus comprising:

a valve that is arranged to be actuated depending on an applied torque for altering pressure of an hydraulic fluid to be received by a hydraulic power steering system for applying a steering assist force, wherein the valve is arranged to be dynamically actuated further, according to a control mechanism depending on at least one external or internal vehicle input parameter, said valve comprising a peripherally toothed member engaged with a cog wheel that is rotary driven and stationarily located relative to the valve;

said valve being arranged to be dynamically actuated further by mechanic displacement of a member of the valve by a motor, said valve member being arranged to be rotatably and/or axially displaced with respect to a shaft in the hydraulic power steering system; and

said motor being arranged to actuate a wheel or a cam arranged to engage said valve member and said wheel or cam being arranged to rotatably engage a guide portion arranged on the valve member for axial displacement of the valve member.

36. (New) The hydraulic power assisting steering apparatus of claim 35, wherein the valve member is arranged so that an axial displacement of the valve member causes it to be rotatably displaced.

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37. (New) A hydraulic power assisting steering apparatus comprising:
a control mechanism depending on at least one external or internal vehicle input parameter,
said valve comprising a peripherally toothed member engaged with a cog wheel that is rotary
driven and stationarily located relative to the valve;

said valve having a first valve member and a second valve member arranged to be
actuated with respect to each other, depending on the applied torque and a vehicle input
parameter so as to dynamically adjust the steering assist force to fit a specific driving scenario;

said first and second valve members being arranged to be rotatably and/or axially
displaced with respect to each other and at least one of the valve members being arranged to be
dynamically actuated further using a motor as a control mechanism for mechanical displacement
of the at least one valve member, wherein the motor is operatively arranged for interaction with
actuating a wheel or a cam that engages the at least one of the valve members; and

said wheel or cam being arranged to rotatably engage with a guide portion formed on the
at least one valve member for at least an axial displacement of the valve member.

38. (New) The hydraulic power assisting steering apparatus of claim 37, wherein the at least one
valve member undergoes axial and rotational displacement of the at least one valve member.

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39. (New) A hydraulic power assisting steering apparatus comprising:

a valve that is arranged to be actuated depending on an applied torque for altering pressure of a hydraulic fluid to be received by a hydraulic power steering system for applying a steering assist force, wherein the valve is arranged to be dynamically actuated via a member thereof according to a control mechanism depending on at least one external or internal vehicle input parameter, the valve member being arranged to be rotatably or axially displaced with respect to a shaft in the hydraulic power steering system; and a motor that actuates a wheel or cam which engages the valve member, the cam being arranged to rotatably engage with a guide portion arranged on the valve member for axially displacing the valve member;

said valve having a first valve member and a second valve member arranged to be actuated with respect to each other, depending on the applied torque and a vehicle input parameter so as to dynamically adjust the steering assist force to fit a specific driving scenario, said first and second valve members being arranged to be rotatably and/or axially displaced with respect to each other and wherein at least one of the valve members is arranged to be dynamically actuated further using a motor as a control mechanism for displacement of the at least one valve member; and

said motor being operatively arranged for interaction with a wheel or a cam that engages the at least one of the valve members and said wheel or cam being arranged to rotatably engage with a guide portion formed on the at least one valve member for at least an axial displacement of the valve member.

40. (New) The hydraulic power assisting steering apparatus of claim 39, wherein the at least one valve member undergoes axial and rotational displacement of the at least one valve member.

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41. (New) The hydraulic power assisting steering apparatus of claim 35, wherein the wheel or cam is a toothed wheel or cam arranged to engage a toothed member on the valve member for a rotary displacement of the valve member.
43. (New) The hydraulic power assisting steering apparatus of claim 37, wherein the wheel or cam is a toothed wheel or cam arranged to engage a toothed member on the valve member for a rotary displacement of the valve member.
44. (New) The hydraulic power assisting steering apparatus of claim 38, wherein the wheel or cam is a toothed wheel or cam arranged to engage a toothed member on the valve member for a rotary displacement of the valve member.
45. (New) The hydraulic power assisting steering apparatus of claim 39, wherein the wheel or cam is a toothed wheel or cam arranged to engage a toothed member on the valve member for a rotary displacement of the valve member.
46. (New) The hydraulic power assisting steering apparatus of claim 40, wherein the wheel or cam is a toothed wheel or cam arranged to engage a toothed member on the valve member for a rotary displacement of the valve member.

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CONCLUSION

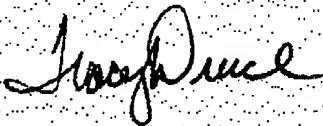
Examiner's indication of the allowability of claims 7, 8, 18, 19, 33 and 34 is noted with appreciation; responsively, the essential subject matter thereof has been rewritten as new claims 35-40, respectively. It is therefore respectfully urged that the new claims be reviewed and that a notification of the allowance of the pending claims issue as the next paper from the Office.

The undersigned representative requests any extension of time that may be deemed necessary to further the prosecution of this application.

The undersigned representative authorizes the Commissioner to charge any additional fees under 37 C.F.R. 1.16 or 1.17 that may be required, or credit any overpayment, to Deposit Account No. 14-1437, Order No. 06730.0056.NPUS00.

In order to facilitate the resolution of any issues or questions presented by this paper, the Examiner should directly contact the undersigned by phone to further the discussion.

Respectfully submitted,



Tracy Druce
Patent Attorney
Reg. No. 35,493
Tel. 202.659.0100